

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name: Charleston Community Research to Action Board (CCRAB)

Address: 2125 Dorchester Rd

City: North Charleston

State: SC: South Carolina

Zip Code: 29405

B. DUNS No. 0795581400000

II. Is the applicant currently receiving EPA Assistance? ☐ Yes ☒ No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

NA

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

NA

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

NA

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R. 5.140 and 7.95)

☒ Yes ☐ No

a. Do the methods of notice accommodate those with impaired vision or hearing?

☒ Yes ☐ No

b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?

☒ Yes ☐ No

c. Does the notice identify a designated civil rights coordinator?

☒ Yes ☐ No

VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. 7.85(a))

☒ Yes ☐ No

IX. Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166)

☒ Yes ☐ No

- X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.

NA

- XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet Address for, or a copy of, the procedures.

NA

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official

Chloe E Stuber

B. Title of Authorized Official

Board Vice-Chair

C. Date

03/25/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. *Signature of Authorized EPA Official

B. Title of Authorized Official

C. Date

*** See Instructions**

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.

LAMC/CCRAB Partnership Agreement Memorandum of Understanding

Lowcountry Alliance for Model Communities (LAMC)

AND

Charleston Community Research to Action Board (CCRAB)

This document describes the agreed responsibilities and expectations between Lowcountry Alliance for Model Communities (LAMC) and Charleston Community Research to Action Board (CCRAB) for the use of funds received through the LAMC Community SCSPA and Palmetto Railways Mitigation. The purpose of the LAMC/CCRAB is to assist with the collection of data from environmental and health studies, expand collaborative research partners to reach the goals and objectives of research projects, share and disseminate research data to interested groups to support advocacy and policy solutions to address environmental justice concerns, and support citizen science efforts.

CCRAB is partnering with LAMC along with the eight communities LAMC advocate with to improve their quality of life. The targeted communities are Accabee, Chicora/Cherokee, Five Mile, Howard Heights, Liberty Hill, Union Heights and Windsor Place.

RESPONSIBILITIES AND EXPECTATIONS

LAMC serves as the organization providing funding in the amount of \$230,000 in mitigation dollars. LAMC is responsible for the following:

- Ensuring the research activities and finances supported by mitigation dollars comply with all mitigation requirements and federal regulations.
- Reporting activities to the LAMC board, mitigation workgroup, SCSPA and Palmetto Railways.
- Providing support and technical assistance to ensure success of community research projects.
- Distributing up to \$250,000 partnering organization to implement community based research as outlined in mitigation agreements.

Under this Agreement, CCRAB agrees to:

- Keep LAMC updated on research activities
- Report use of funds on an annual basis
- Establish partnerships that enhance the research capabilities of CCRAB
- Participate in quarterly mitigation workgroup meetings
- Comply with all appropriate local, state, or Federal laws and regulations regarding the use of funds provided through LAMC's mitigation funds

DISBURSEMENT OF PROJECT FUNDS

Disbursement of funds will occur specifically as outlined in mitigation agreements with SCPA and Palmetto Railways on an annual basis. CCRAB must make an official request for funding to LAMC. This request will be evaluated and approved by the LAMC board which at that time a request will be made for a check to be remitted to CCRAB from the Coastal Community Foundation.

TIME PERIOD

SCSPA funding is for 5 years totaling \$100,000. CCRAB has partnered with the Medical University of South Carolina to execute air quality studies in the LAMC community plus the Rosemont Neighborhood.

Palmetto Railways funds are currently being disbursed on an annual basis which CCRAB can request payment with approval from LAMC yearly until \$130,000 is reached.

Signatures of authorized agency representatives:



Omar Muhammad
Executive Director
Lowcountry Alliance for Model Communities



Skip Mikell
Board Chairman
Charleston Community Research to Action Board



EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name:	Prefix:	First Name: Chloe	Middle Name:
	Last Name: Stuber		Suffix:
Title:	Board Vice-Chair, Chief Operating Officer		
Complete Address:			
Street1:	2125 Dorchester Rd		
Street2:			
City:	North Charleston	State:	SC: South Carolina
Zip / Postal Code:	29405	Country:	USA: UNITED STATES
Phone Number:	912-308-0361	Fax Number:	
E-mail Address:	chloe.e.stuber@gmail.com		

Payee: *Individual authorized to accept payments.*

Name:	Prefix:	First Name: Gladys	Middle Name:
	Last Name: Moorer		Suffix: B
Title:	Board Treasurer, Chief Financial Officer		
Complete Address:			
Street1:	2125 Dorchester Rd		
Street2:			
City:	North Charleston	State:	SC: South Carolina
Zip / Postal Code:	29405	Country:	USA: UNITED STATES
Phone Number:	757-620-8755	Fax Number:	
E-mail Address:	gmoorer.ccrab@gmail.com		

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

Name:	Prefix:	First Name: Chloe	Middle Name:
	Last Name: Stuber		Suffix:
Title:	Board Vice-Chair, Chief Operating Officer		
Complete Address:			
Street1:	2125 Dorchester Rd		
Street2:			
City:	North Charleston	State:	SC: South Carolina
Zip / Postal Code:	29405	Country:	USA: UNITED STATES
Phone Number:	912-308-0361	Fax Number:	
E-mail Address:	chloe.e.stuber@gmail.com		

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: Prefix: **First Name:** **Middle Name:**
Last Name: **Suffix:**
Title:

Complete Address:

Street1:
Street2:
City: **State:**
Zip / Postal Code: **Country:**
Phone Number: **Fax Number:**
E-mail Address:

Other Attachment File(s)

* Mandatory Other Attachment Filename:

Add Mandatory Other Attachment

Delete Mandatory Other Attachment

View Mandatory Other Attachment

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment

Delete Optional Other Attachment

View Optional Other Attachment

Project Narrative File(s)

* **Mandatory Project Narrative File Filename:**

Add Mandatory Project Narrative File

Delete Mandatory Project Narrative File

View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File

Delete Optional Project Narrative File

View Optional Project Narrative File

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Application Objective 1	66.034	\$	\$	186,027.00	77,240.00	263,267.00
2. Application Objective 2	66.034			5,000.00	0.00	5,000.00
3. Application Objective 3	66.034			4,500.00	30,000.00	34,500.00
4. All Objectives	66.034			304,188.00	51,000.00	355,188.00
5. Totals		\$	\$	499,715.00	158,240.00	657,955.00

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SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1) Application Objective 1	(2) Application Objective 2	(3) Application Objective 3	(4) All Objectives	
a. Personnel	\$ 0.00	\$ 0.00	\$ 0.00	\$ 192,000.00	\$ 192,000.00
b. Fringe Benefits	0.00	0.00	0.00	19,200.00	19,200.00
c. Travel	0.00	0.00	0.00	0.00	0.00
d. Equipment	52,168.00	0.00	0.00	0.00	52,168.00
e. Supplies	0.00	0.00	0.00	2,500.00	2,500.00
f. Contractual	0.00	0.00	0.00	4,000.00	4,000.00
g. Construction	0.00	0.00	0.00	0.00	0.00
h. Other	133,859.00	5,000.00	4,500.00	55,600.00	198,959.00
i. Total Direct Charges (sum of 6a-6h)	186,027.00	5,000.00	4,500.00	273,300.00	\$ 468,827.00
j. Indirect Charges	0.00	0.00	0.00	30,888.00	\$ 30,888.00
k. TOTALS (sum of 6i and 6j)	\$ 186,027.00	\$ 5,000.00	\$ 4,500.00	\$ 304,188.00	\$ 499,715.00
7. Program Income	\$	\$	\$	\$	\$

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8.	Application Objective 1	\$ 77,240.00	\$	\$ 0.00	\$ 77,240.00
9.	Application Objective 2	0.00			0.00
10.	Application Objective 3	30,000.00			30,000.00
11.	All Objectives	51,000.00			51,000.00
12. TOTAL (sum of lines 8-11)		\$ 158,240.00	\$	\$ 0.00	\$ 158,240.00

SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 197,834.00	\$ 87,797.00	\$ 35,979.00	\$ 36,029.00	\$ 38,029.00
14. Non-Federal	\$ 63,490.00	28,240.00	11,500.00	11,500.00	12,250.00
15. TOTAL (sum of lines 13 and 14)	\$ 261,324.00	\$ 116,037.00	\$ 47,479.00	\$ 47,529.00	\$ 50,279.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program		FUTURE FUNDING PERIODS (YEARS)			
		(b)First	(c) Second	(d) Third	(e) Fourth
16.	Application Objective 1	\$ 96,788.00	\$ 44,620.00	\$ 44,620.00	\$
17.	Application Objective 2	0.00	1,000.00	4,000.00	
18.	Application Objective 3	900.00	1,800.00	1,800.00	
19.	All Objectives	100,146.00	102,646.00	101,396.00	
20. TOTAL (sum of lines 16 - 19)		\$ 197,834.00	\$ 150,066.00	\$ 151,816.00	\$

SECTION F - OTHER BUDGET INFORMATION	
21. Direct Charges:	\$468,827
22. Indirect Charges:	\$30,888
23. Remarks:	

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ADDENDUM

Date: May 7, 2022

Subject: Application Addendum - EPA Enhanced Air Quality Monitoring for Communities

Opportunity Number: EPA-OAR-OAQPS-22-01

Application Name: CCRAB Community Air Monitoring (North Charleston, SC)

The Charleston Community Research to Action Board (CCRAB) is requesting your consideration of an addendum to our original grant application submitted on March 25, 2022. The original application contains errors in the budget sections that may cause confusion during the review process. We understand that revisions are not accepted past the deadline. However, we feel it is important to acknowledge the errors and proactively offer the corrected budget information should the review team be interested in funding our proposal.

It is important to note we are proposing to change the EPA funding request from the original request of \$499,715 to the corrected request of \$467,043. We are also proposing to change the total project cost from the original amount of \$657,955 to the corrected amount of \$583,283. There are also proposed changes to individual budget item lines. Attached is a summary of the budget corrections, revised itemized project budget table, and budget narrative.

Thank you for your consideration of this request. Please do not hesitate to contact me should you have any questions or concerns at chloe.c.stuber@gmail.com and (912) 308-0361.

Most sincerely,

Chloe Stuber

Chloe Stuber, Vice-Chair

Charleston Community Research to Action Board (CCRAB)



PROPOSED FUNDING REQUEST

	ORIGINAL	CORRECTED
CCRAB Funding	\$158,240	\$116, 240
EDA Funding Request	\$499,715	\$467,043
TOTAL	\$657,955	\$583,283

TOTAL PROJECT BUDGET SUMMARY TABLE

	ORIGINAL	CORRECTED
Personnel	\$192,000	\$171,600
Fringe Benefits	\$19,200	\$18,720
Travel	\$2,000	\$0
Equipment	\$67,168	\$67,168
Supplies	\$5,000	\$5,000
Contractual	\$39,000	\$39,000
Other	\$302,699	\$271,499
Indirect Charges	\$30,888	\$10,296
TOTAL	\$657,955	\$583,283

CORRECTED ITEMIZED BUDGET

Line Item & Itemized Cost	EPA Funding Requested	CCRAB Funding Provided
Personnel		
Project Manager (FTE) 80% of (\$25/hr x 40 hrs/wk x 156 wks)	\$124,800	\$0
Project Training & Education Fellow (\$1,300/month stipend)	\$46,800	\$0
TOTAL PERSONNEL	\$171,600	\$0
Fringe Benefits		
15% of requested amount for Project Manager salary	\$18,720	\$0
TOTAL FRINGE BENEFITS	\$18,720	\$0
Travel		
TOTAL TRAVEL	\$0	\$0
Equipment		
8 Aeroqual AQY-Y multipollutant monitoring platforms @ \$6,521/unit	\$52,168	\$0
Fixed Site Preparation and Infrastructure	\$0	\$15,000
TOTAL EQUIPMENT	\$52,168	\$15,000
Supplies		
Event Supplies (facilitation materials and refreshments)	\$2,500	\$2,500
TOTAL SUPPLIES	\$2,500	\$2,500
Contractual		
Data Management & Communications consultant	\$0	\$30,000
Outreach & Communications (Translation)	\$0	\$3,000
Event expenses (Interpretation and Childcare)	\$4,000	\$2,000
TOTAL CONTRACTUAL	\$4,000	\$35,000
Other		
Aeroqual Training and Technical Support (8 hrs)	\$0	\$1,240
Aeroqual Shipping Costs	\$0	\$1,000
Event Rental	\$2,000	\$0
Printing (signage and outreach materials)	\$0	\$1,500
<i>Subawards</i>		
MUSC Air Quality Lab Subaward	\$133,859	\$60,000
LAMC Subaward	\$62,400	\$0
<i>Participant Support Costs</i>		
Monitor Host Compensation	\$5,000	\$0
Focus Group Gift Cards	\$4,500	\$0
TOTAL OTHER	\$207,759	\$63,740
Indirect Charges		
Administrative Assistant (PTE) 15% x (Salary + Fringe Benefits)	\$10,296	\$0
TOTAL INDIRECT	\$10,296	\$0
TOTAL FUNDING	\$467,043	\$116,240
TOTAL PROJECT COST	\$583,283	



BUDGET NARRATIVE

Personnel

Project Manager (FTE): The Project Manager is a salaried full-time position at 40 hours per week, earning \$52,000 annually. Eighty percent (80%) of their time will be dedicated to this project. The total request for the budget period for this position is \$124,800. Previously, the Project Manager salary for the 3-year grant period was calculated at \$234,000. The corrected 3-year total is \$156,000. In the corrected budget, the position was adjusted from PTE to FTE because the budget corrections demonstrated that a full-time position was fundable.

Training & Education Fellow. A part-time project fellow will be supported by a monthly stipend of \$1,300. The Training & Education Fellow will work with the MUSC Air Quality Lab, LAMC and CCRAB to develop and deliver training curriculum offered throughout the grant period.

The corrections to other line items demonstrated that the fellowship position was fundable, so the revised request reflects an addition of a Training & Education Fellow position.

Fringe Benefits

The Fringe Benefit rate is adjusted from 10% for part-time positions to 15% for full-time positions. The fringe benefit rate for FTE positions was added.

Travel

The travel line item was included in the original budget table mistakenly and should be removed. Our site visits will be conducted primarily by residents and community members living in close proximity to monitors and thus we do not anticipate travel expenses.

Equipment

Instrumentation: 8 Aeroqual AQY-Y multipollutant monitoring platforms (quoted at \$6,521/unit).

Fixed Site preparation & Infrastructure: CCRAB is fully funding this expense.

Supplies

Event supplies. Meeting materials, food and drinks for 20 in-person events, averaging \$125 per event. CCRAB will provide a cost share of 50%.

Contractual

For all three services listed below, CCRAB will solicit quotes from at least three providers. The Board of Directors will compare quotes and qualifications and make the selection decision.

Data Management & Communications consultant. CCRAB is fully funding this expense.

Outreach & Communication expenses (translation). CCRAB is fully funding this expense.

Event expenses (childcare & interpretation). Two interpreters at \$50/hr and two childcare providers at \$25/hr for an estimated twenty (20) total events, each 2-hours long. CCRAB will provide a cost share of 30%.

Other

Aeroqual Technical and Training Support. CCRAB is fully funding this expense.



Aeroqual Shipping Costs. CCRAB is fully funding this expense.

Event Rental: CCRAB is fully funding this expense.

MUSC Air Quality Lab Subaward. We understand that subrecipients are subject to Section IV.d. of the EPA Solicitation Clauses. The AQL will receive \$133,859 to cover 5% of Dr. Pearce's time (salary and fringe benefits), air monitoring data services, and equipment calibration and repair costs for the fixed-site monitors. CCRAB will provide a cost share of 31%.

LAMC Subaward. LAMC will receive \$62,400 to support a part-time Community Organizer who will dedicate 50% of their time to support project-related partnership activities including outreach, engagement and capacity-building. Previously, the subaward was calculated at \$93,600 with CCRAB providing a 45% cost-share. In the corrected budget, the position was adjusted from PTE to FTE and the cost-share was eliminated because the budget corrections demonstrated that a full-time position was fundable within EPA requested funds.

Monitor Host Compensation. Up to 20 monitor hosts will be provided an annual flat compensation of \$150 and reimbursed for electricity and internet (if supplying) at a rate of 5% of total bills. It is anticipated that there will be 5 total monitor hosts by start of year 2, 10 total by start of year 3, and 20 total by end of the budget period.

Focus Group Gift Cards. Focus group participants will be provided a \$50 gift card per session for their participation (15 focus group sessions, six (6) participants per session).

Indirect

Administrative Assistant. The indirect rate of 15% is applied to a part-time Administrative Assistant with an annual salary of \$20,800 plus \$2,080 in annual Fringe Benefits (10% Fringe Rate). Previously, the Administrative Assistant salary and fringe benefits total for the 3-year grant period was calculated at \$205,920. The corrected 3-year salary and fringe benefit total is \$68,640.

Application for Federal Assistance SF-424

* 1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application		* 2. Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision		* If Revision, select appropriate letter(s): <div style="border: 1px solid black; height: 15px; width: 100%;"></div> * Other (Specify): <div style="border: 1px solid black; height: 15px; width: 100%;"></div>	
* 3. Date Received: <div style="border: 1px solid black; padding: 2px;">03/25/2022</div>		4. Applicant Identifier: <div style="border: 1px solid black; height: 15px; width: 100%;"></div>			
5a. Federal Entity Identifier: <div style="border: 1px solid black; height: 15px; width: 100%;"></div>			5b. Federal Award Identifier: <div style="border: 1px solid black; height: 15px; width: 100%;"></div>		
State Use Only:					
6. Date Received by State: <div style="border: 1px solid black; width: 100px; height: 15px;"></div>		7. State Application Identifier: <div style="border: 1px solid black; width: 200px; height: 15px;"></div>			
8. APPLICANT INFORMATION:					
* a. Legal Name: <div style="border: 1px solid black; padding: 2px;">Charleston Community Research to Action Board (CCRAB)</div>					
* b. Employer/Taxpayer Identification Number (EIN/TIN): <div style="border: 1px solid black; padding: 2px;">46-1521161</div>			* c. Organizational DUNS: <div style="border: 1px solid black; padding: 2px;">0795581400000</div>		
d. Address:					
* Street1:		<div style="border: 1px solid black; padding: 2px;">2125 Dorchester Rd</div>			
Street2:		<div style="border: 1px solid black; height: 15px; width: 100%;"></div>			
* City:		<div style="border: 1px solid black; padding: 2px;">North Charleston</div>			
County/Parish:		<div style="border: 1px solid black; height: 15px; width: 100%;"></div>			
* State:		<div style="border: 1px solid black; padding: 2px;">SC: South Carolina</div>			
Province:		<div style="border: 1px solid black; height: 15px; width: 100%;"></div>			
* Country:		<div style="border: 1px solid black; padding: 2px;">USA: UNITED STATES</div>			
* Zip / Postal Code:		<div style="border: 1px solid black; padding: 2px;">29405-7763</div>			
e. Organizational Unit:					
Department Name: <div style="border: 1px solid black; height: 15px; width: 100%;"></div>			Division Name: <div style="border: 1px solid black; height: 15px; width: 100%;"></div>		
f. Name and contact information of person to be contacted on matters involving this application:					
Prefix:		* First Name: <div style="border: 1px solid black; padding: 2px;">Chloe</div>			
Middle Name:		<div style="border: 1px solid black; height: 15px; width: 100%;"></div>			
* Last Name:		<div style="border: 1px solid black; padding: 2px;">Stuber</div>			
Suffix:		<div style="border: 1px solid black; height: 15px; width: 100%;"></div>			
Title: <div style="border: 1px solid black; padding: 2px;">Board Vice-Chair, Chief Operating Officer</div>					
Organizational Affiliation: <div style="border: 1px solid black; height: 15px; width: 100%;"></div>					
* Telephone Number: <div style="border: 1px solid black; padding: 2px;">843-790-3391</div>			Fax Number: <div style="border: 1px solid black; height: 15px; width: 100%;"></div>		
* Email: <div style="border: 1px solid black; padding: 2px;">ccrab.info@gmail.com</div>					

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities
Relating to the Clean Air Act

* 12. Funding Opportunity Number:

EPA-OAR-OAQPS-22-01

* Title:

Enhanced Air Quality Monitoring for Communities

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Enhanced community air monitoring network in eight(8) environmental justice communities in
Charleston County, SC.

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:**

* a. Applicant

SC 6

* b. Program/Project

SC 6

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

11/01/2022

* b. End Date:

11/30/2025

18. Estimated Funding (\$):

* a. Federal	499,715.00
* b. Applicant	158,240.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	657,955.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.☒ c. Program is not covered by E.O. 12372.*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

* First Name:

Chloe

Middle Name:

* Last Name:

Stuber

Suffix:

* Title:

Board Vice-Chair

* Telephone Number:

912-308-0361

Fax Number:

* Email:

chloe.e.stuber@gmail.com

* Signature of Authorized Representative:

Chloe E Stuber

* Date Signed:

03/25/2022

Message

From: Roberts, Timothy-P [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0D75A73145564B4B932C9AB3DBBACF3E-ROBERTS, TIMOTHY-P]
Sent: 5/11/2022 5:18:27 PM
To: Chloe Stuber [chloe.e.stuber@gmail.com]; AirMonitoring [AirMonitoring@epa.gov]
CC: Mocka, Corey [mocka.corey@epa.gov]; Dowdell, Edward (Ned) [Dowdell.Ned@epa.gov]; Thompson, Ashley [Thompson.Ashley.M@epa.gov]
Subject: RE: EPA-OAR-OAQPS-22-01

Chloe – Thank you for applying under this grant competition and sending us these revisions. You are correct that we cannot rely on these revisions when we evaluate your application because they were submitted past the deadline. If your application is selected for funding, there may be opportunities to revise your submitted budget as part of the grant award phase. We anticipate notifying all applicants whether they are selected for funding around September 2022.

Feel free to reach out to us if you have any additional questions.

Tim Roberts
Acting Team Leader/JRO
Acquisition Policy Team
OAR, Office of Program Management Operations
U.S. Environmental Protection Agency
202-564-6004
roberts.timothy-p@epa.gov

From: Chloe Stuber <chloe.e.stuber@gmail.com>
Sent: Saturday, May 07, 2022 1:08 PM
To: AirMonitoring <AirMonitoring@epa.gov>
Subject: EPA-OAR-OAQPS-22-01

Good afternoon:

This email is in regard to an application submitted for the Enhanced Air Quality Monitoring for Communities by Charleston Community Research to Action Board (CCRAB). Our Grants.gov tracking information is below.

Grants.gov Tracking Number: GRANT13580593
UEI: EAXQKLTW1W71
AOR name: Chloe E Stuber
Application Name: CCRAB Community Air Monitoring
Opportunity Number: EPA-OAR-OAQPS-22-01
Opportunity Name: Enhanced Air Quality Monitoring for Communities

CCRAB is requesting your consideration of an addendum to our original grant application submitted on March 25, 2022. The original application contains errors in the budget section that may cause confusion during the review process. We understand that revisions are not accepted past the deadline. However, we felt it was important to acknowledge the errors and proactively offer the corrected budget information should the review team be interested in funding our proposal.

Attached is a formal request for the review team's consideration and includes a summary of the budget corrections, itemized project budget table, and budget narrative.

Thank you for your consideration of this request. Please do not hesitate to contact me should you have any questions or concerns at chloe.e.stuber@gmail.com and (912) 308-0361.

Most sincerely,

Chloe Stuber

she/her/hers/ella

912.308.0361

INTERNAL REVENUE SERVICE
P. O. BOX 2508
CINCINNATI, OH 45201

DEPARTMENT OF THE TREASURY

Date: SEP 10 2014

CHARLESTON COMMUNITY RESEARCH TO
ACTION BOARD
C/O HERB FRASIER-RAHIM
2125 DORCHESTER RD
NORTH CHARLESTON, SC 29405

Employer Identification Number:
46-1521161

DLN:

17053071304044

Contact Person:

CUSTOMER SERVICE

ID# 31954

Contact Telephone Number:

(877) 829-5500

Accounting Period Ending:

December 31

Public Charity Status:

170(b)(1)(A)(vi)

Form 990 Required:

Yes

Effective Date of Exemption:

April 8, 2013

Contribution Deductibility:

Yes

Addendum Applies:

No

Dear Applicant:

We are pleased to inform you that upon review of your application for tax exempt status we have determined that you are exempt from Federal income tax under section 501(c)(3) of the Internal Revenue Code. Contributions to you are deductible under section 170 of the Code. You are also qualified to receive tax deductible bequests, devises, transfers or gifts under section 2055, 2106 or 2522 of the Code. Because this letter could help resolve any questions regarding your exempt status, you should keep it in your permanent records.

Organizations exempt under section 501(c)(3) of the Code are further classified as either public charities or private foundations. We determined that you are a public charity under the Code section(s) listed in the heading of this letter.

For important information about your responsibilities as a tax-exempt organization, go to www.irs.gov/charities. Enter "4221-PC" in the search bar to view Publication 4221-PC, Compliance Guide for 501(c)(3) Public Charities, which describes your recordkeeping, reporting, and disclosure requirements.

Sincerely,



Director, Exempt Organizations

Letter 947

Manifest for Grant Application # GRANT13580593

Grant Application XML file (total 1):

1. GrantApplication.xml. (size 29882 bytes)

Forms Included in Zip File(total 6):

1. Form ProjectNarrativeAttachments_1_2-V1.2.pdf (size 16030 bytes)

2. Form SF424_3_0-V3.0.pdf (size 24139 bytes)

3. Form SF424A-V1.0.pdf (size 23711 bytes)

4. Form EPA4700_4_3_0-V3.0.pdf (size 22638 bytes)

5. Form OtherNarrativeAttachments_1_2-V1.2.pdf (size 15914 bytes)

6. Form EPA_KeyContacts_2_0-V2.0.pdf (size 37302 bytes)

Attachments Included in Zip File (total 6):

1. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1238-ResumesKeyPersonnel_CCAB.pdf application/pdf (size 362218 bytes)

2. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1234-ProofofNonprofitStatus_CCAB.pdf application/pdf (size 31640 bytes)

3. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1237-PartnershipLetters_CCAB.pdf application/pdf (size 798011 bytes)

4. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1236-Community-BasedOrganizationDocumentation_CCAB.pdf application/pdf (size 126158 bytes)

5. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1235-QualityAssuranceStatement_CCAB.pdf application/pdf (size 137083 bytes)

6. ProjectNarrativeAttachments_1_2 ProjectNarrativeAttachments_1_2-Attachments-1239-ProjectNarrativeFINAL_CCAB(full).pdf application/pdf (size 1335982 bytes)

Quality Assurance Statement

This **Quality Assurance Statement (QAS)** details the quality control procedures used to ensure activities within this proposal meet exceptional standards for community engaged research. Our intention is to use our community air monitoring program to support supplemental monitoring efforts, education, and awareness applications in our neighborhoods. Procedures are outlined below by project objectives and we note efforts were made to align our strategies with methods within EPA's Air Sensor Toolbox. Dr. Pearce, our academic partner, will lead quality control and assurance activities for this project as part of the subaward. As the leader of the MUSC Air Quality Lab, he has the necessary knowledge and expertise for this role. Dr. Pearce will work with CCRAB to ensure board members understand how data quality is assessed and evaluated following guidance outlined below. We currently have a strong collaboration with Dr. Pearce through CAAMN and will work with his lab to transition these activities to CCRAB project staff by year three.

Objective 1: Establish community capacity to conduct long-term monitoring of air pollution for particulate matter (PM_{2.5}), nitrogen oxides (NO_x), and ozone (O₃) in real-time.

The key outcome for objective 1 is the generation of air pollution data that can support a Community Monitoring Plan that provides real-time data reporting, air quality alerts and information that can be used to establish longer term neighborhood trends. To ensure these data are of the highest quality we implement the following protocol:

1. *Instrument Selection.* Environmental monitoring instruments proposed in this project have documented high-level performance standards outlined by EPA's Air Sensor Performance Targets and independent field evaluations (1-3). This includes the following instruments:

Pollutant	Instrument	Performance Targets	Application
PM2.5	TSI DustTrak	Near-reference	Supplemental
PM2.5	Aeroqual AQY-R	Near-reference	Supplemental/Awareness
PM2.5	PurpleAir	Screening Grade	Education/Awareness
O3	2BTech Model 202	Federal Equivalent Method	Supplemental
O3	Aeroqual AQY-R	Near-Reference	Supplemental/Awareness
NO2	2BTech Model 405	Federal Equivalent Method	Supplemental
NO2	Aeroqual AQY-R	Near-Reference	Supplemental/Awareness

2. *Instrument Assessment Prior to Field Deployment.* We propose the two steps prior to instrument deployments: 1) instruments be factory calibrated according to manufacturer's recommendations; and 2) instruments undergo a 2-week *co-located* air monitoring campaign to assess performance in our local environment. Results will be used to identify precision, accuracy, and completeness of data provided by our platform. Results will be used to identify if any data adjustments are needed to meet application performance targets (3). Co-locations will be conducted at a DHEC monitoring site with sub-hourly data being collected for two weeks (minimum.) Results will be compared to EPA's Air Sensor performance targets using descriptive statistics, measures of validity and completeness, correlations, and bias (2).
3. *Data Collection and Reporting.* Our community air monitoring plan will collect pollutant/stressor values every minute at our fixed site locations. Raw values will be stored on a local data logger and transmitted at 1-min intervals to manufacturer web platforms.

Quality Assurance Statement

These data, subject to disclaimer, will initially be used to support real-time data reporting (i.e., awareness activity). However, for longer-term data assessments (supplemental activities) additional assurances will be used to perform quality assessment and control of the raw data. This will involve accessing the data via API server and implementation of a data evaluation procedure that seeks to retain data if certain plausible conditions are met (e.g., no large negative values, etc.) (3). Once retained, 15-min averages will be calculated for each pollutant if at least 80% (this may be modified according to Sensor Performance Guidance) of the 1-minute data for a given 15-min interval were available. Then, averaged data may be calibrated using necessary adjustments identified by our co-location monitoring efforts. Results, along with raw data, will be used for long-term evaluation and reporting of supplemental monitoring activities. Air quality screening (e.g., PurpleAir) data will be obtained from manufacturer provided platforms and processed similarly.

4. *Data Communication.* Real-time data will be made available on the Charleston Community Air Monitoring Network's (CCAMN) Community Data Hub. Our system will process and report data in sub-hourly intervals on the website in order to increase air quality awareness. Annual reports and an interactive Dashboard will summarize trends in air quality across study communities and will provide information on the within-day and long-term trends within and across monitoring sites..

Objective 3: Increase community awareness and understanding of air quality data and related public health impacts.

The key outcome for objective 3 is to facilitate broad awareness and mutual understanding of air quality data and related public health impacts across multiple stakeholder groups and to create a trusted community engagement platform that helps address environmental concerns. To ensure quality of data reporting methods outlined in the main project narrative, we propose to implement the following practices:

1. *Quality Data Inputs.* As outlined above, the air monitoring data collected under this project will be of high quality due to careful selection of state-of-the-art instrumentation and selection of a relevant pollutant scope to address our neighborhood concerns.
2. *Focus Groups.* Reporting scientific data and translating results into trusted knowledge is a difficult task. To improve our efforts, we propose to conduct community focus groups to assist with the development of our community engagement platform. Focus groups will consist of multiple community members and will be hosted in accordance to our timeline.
3. *Data Transparency.* Our instrumentation and data collection protocols will be made available on our web page.

CITATIONS

1. Hagler GS, Williams R, Papapostolou V, Polidori A. Air quality sensors and data adjustment algorithms: When is it no longer a measurement? : ACS Publications; 2018.
2. EPA. Air Sensor Performance Targets. Online: 2021.
3. Commodore S, Metcalf A, Post C, Watts K, Reynolds S, Pearce J. A Statistical Calibration Framework for Improving Non-Reference Method Particulate Matter Reporting: A Focus on Community Air Monitoring Settings. *Atmosphere*. 2020;11(8):807.

Project Title: Enhancing A Participatory Community Air Monitoring Network in North Charleston, SC

Applicant Information:

Organization: Charleston Community Research to Action Board (CCRAB)

Address: 2125 Dorchester Road, North Charleston, SC 29405

Primary Contact: Chloe Stuber, (912) 308-0361, chloe.e.stuber@gmail.com

DUNS No: 079558140 (UEI: EAXQKLTW1W71)

Set-Aside: (Community-based organization) The Charleston Community Research to Action Board (CCRAB) represents eight (8) environmental justice communities in Charleston County, South Carolina with numerous environmental and health disparities related to surrounding port facilities, industrial development and highway infrastructure. See Project Location for complete list of communities.

Organization Description: CCRAB promotes safe, healthy, and just neighborhoods within environmental justice communities in the Charleston region through community-based participatory research and citizen science. CCRAB facilitates numerous university-community partnerships to investigate environmental and public health concerns identified by residents including but not limited to: air quality, soil quality, water quality, and flooding and climate change impacts. CCRAB coordinates the Charleston Community Air Monitoring Network (CCAMN), a collaboration between near-port communities, academia, industry, and regulatory agencies to coordinate across multiple air pollution data collection activities and improve local knowledge of air quality among local residents.

Project Partners: Medical University of South Carolina (Dr. John Pearce); Lowcountry Alliance for Model Communities (Omar Muhammad); SC DHEC (Myra Reece); SC State Ports Authority (Mark Messersmith); Community Neighborhood Associations (various contacts).

Project Locations: Rosemont (Charleston, SC, 29405); Accabee, Chicora-Cherokee, Five Mile, Howard Heights, Liberty Hill and Windsor Place (North Charleston, SC, 29405).

Air Pollutant Scope: Particulate Matter (PM_{2.5}), Nitrogen Oxides (NO_x), and Ozone (O₃)

Project Budget Summary:

EPA Funding Requested	Total Project Cost
\$499,715	\$ 657,955

Project Period: November 1, 2022 – November 30, 2025

Short Project Description: CCRAB will leverage academic, community and agency partnerships to establish a state-of-the-art community air monitoring network in eight (8) environmental justice communities. Through deployment of fixed-site near-reference monitors and PurpleAir screening monitors, capacity-building and educational programming, and a portfolio of data communication tools, CCRAB will establish capacity of communities to conduct long-term monitoring of air pollution in real-time, understand air quality data and related health impacts, and guide air quality research and interventions long-term. Nationally, project results will contribute knowledge to EPA's Ports Initiative and efforts to improve community-port collaborations.

Section I: Project Summary & Approach

A. Overall Project

CCRAB requests funding to support our community air monitoring capabilities by enhancing our state-of-the-art community air monitoring network – the ***Charleston Community Air Monitoring Network (CCAMN)*** – that supports community-led air monitoring in eight environmental justice communities and coordinates across multiple air pollution data collection activities to improve local air quality knowledge. CCAMN was established under a first of its kind ***Community Mitigation Plan Agreement (MPA)*** between communities represented by the Lowcountry Alliance for Model Communities (**LAMC**), City of North Charleston, and South Carolina State Ports Authority (**SCSPA**). Current participants include LAMC, the Medical University of South Carolina (**MUSC**), South Carolina Department of Health and Environmental Control (**DHEC**), and SCSPA. This project will support EPA’s 2022-2026 strategic plan (e.g., Goals 1, 2, 4, and 6), the Ports Initiative and efforts to improve community-port collaboration.

Project Objective 1: Establish community capacity to conduct long-term monitoring of pollutants particulate matter (PM_{2.5}), nitrogen oxides (NO₂), and ozone (O₃) in real-time.

CCRAB will collect near-reference air quality data in five **Monitoring Areas (MA)** across eight communities. Four of the communities (Five Mile, Howard Heights, Union Heights and Windsor Place) are small, located closely together and have collective representation under the Union Heights Neighborhood Association. Together they form a single MA (Union Heights MA). CCRAB will use funds to purchase eight of Aeroqual’s AQY-R Air Quality Monitor (Aeroqual Inc., Auckland New Zealand) for measuring O₃, NO₂, and PM_{2.5} in up to eight locations near community points of interest (including the existing two locations), for a minimum of one per MA. Each site will deploy a range of instrumentation (see QAS) that meet either federal equivalent method (FEM), near reference method (NRM), or screening performance targets outlined in EPA’s Air Sensor Toolbox for air pollution monitoring. Prior to deployment of the new monitoring equipment, we will carry out instrument assessment activities (see QAS) to ensure quality data collection and reporting. Deployment will consist of site identification, site preparation (installation of secure fenced enclosure, wooden platform, galvanized steel pole for mounting equipment at respiratory height (~6ft), and continuous AC power supply). Sites will also serve as an Internet of Things (IoT) Platform for Cloud-based data exchange. The MUSC Air Quality Lab (**AQL**) and citizen scientists will conduct routine maintenance through remote web-platforms and monthly site visits. See QAS for details on mechanics of data collection and reporting.

Project Objective 2: Grow a local network of citizen scientists and develop community capacity to guide air quality research and interventions long-term.

CCRAB will develop a portfolio of training and education programs to engage residents and youth as citizen scientists and increase community involvement and leadership in long-term air quality research. CCRAB will work with the AQL and LAMC to develop training and education curriculum catered to each program. Curriculum created for the Community Monitoring Advisory Boards (CMAB) will also serve to expand on LAMC’s existing EJ Academy curriculum by creating a new Community Air Monitoring Module. ***Community Monitoring Advisory Board (CMAB) development.*** CCRAB will recruit and train up to 20 residents (2-4 from each MA) to serve on a CMAB for their MA. CMAB members will participate in LAMC’s EJ Academy and Community Air Monitoring Module. The curriculum will cover deployment and maintenance of fixed-site and PurpleAir monitors; data collection, management, evaluation and reporting; and public health impacts and risk reduction strategies. CMAB members will assist with ongoing maintenance, data analysis and evaluation; attend regular CCAMN meetings; and provide

orientation and training to PurpleAir Monitor Hosts. CCRAB and LAMC will host an annual CMAB gathering to provide an opportunity for networking, peer support and additional training. LAMC will establish a CMAB Operational Fund to support ongoing CMAB operations and initiatives. *Resident-led Air Quality Screening*. CCRAB will work with CMABs and neighborhood leadership to identify locations to deploy PurpleAir monitors to screen for hotspots and guide research. CCRAB and CMABs will recruit and train 3-4 Monitor Hosts for each MA (up to 20 total). Training will cover information on the equipment, site location and installation, data tools, and Monitor Host responsibilities (to report any observable damage to the monitor sites and respond to communication received from CMAB and CCRAB members). Monitor Hosts will be prioritized for focus group recruitment and will attend regular CCAMN meetings. *Citizen Science in Schools partnerships*. CCRAB will confirm partnerships with at least two public schools located in the monitoring area. Exact program details will be co-created with the school leadership during the grant period and will depend on the age group, assigned faculty and specialty program opportunities. Educational goals for the program include: an introduction to environmental justice; awareness of local pollution sources and public health issues; and collecting and using environmental data. When possible, CCRAB will partner with classrooms and youth programs to conduct site visits to monitoring stations and Data Access sites. Students who participate in the programs will receive a “Young Citizen Scientist” Certification.

Objective 3: Increase community awareness and understanding of air quality data and related public health impacts.

CCRAB will continue to convene CCAMN on a quarterly basis to facilitate collaboration between near-port communities, academia, industry, and regulatory agencies; coordinate across multiple data collection activities; and improve local knowledge of air quality among local residents. To enhance CCAMN’s capacity toward these goals, CCRAB will establish multiple platforms for sharing and communicating air quality data that facilitates increased community engagement in CCAMN and ensures data collected through resident-led research is used to inform interventions and policy. Data Access Sites will be established in all MAs to ensure residents without computer or internet access can access the online data tools. *Real-time Air Quality Reporting*: An alert system using real-time air quality data will be developed to notify residents when there is increased risk of exposure to air toxins. Residents will be able to subscribe to receive alerts via text, email or push notifications. To increase access for those with limited technology, alerts will also be transmitted via an easily visible indicator installed on each fixed-site monitor to signal exposure risk. *Communicating Trends & Progress*: CCRAB will establish an interactive Air Quality Dashboard on CCAMN’s website (CCAMN.org.) and produce annual Air Quality Report Cards, both to be designed and tested with focus groups with residents and other key stakeholders. Reports will be used to assess current and historic air quality trends and measure progress toward lowering emissions. *Data Sharing*: CCRAB will establish the CCAMN Data Hub, a centralized location for all air quality data collected by CCRAB and other community partners. Data will be available for download and/or via API feed (when available). CCRAB will test a prototype of the Data Hub with focus groups with citizen scientists and other primary data users.

B. Project Significance

EPA’s 2016 National Port Strategy Assessment revealed approximately 39 million people in the United States currently live in close proximity to ports raising numerous environmental health concerns due to port-related emissions known to increase risk for a broad range of adverse health

outcomes such as asthma and heart disease¹. Ports across the US, particularly on the east coast, have been expanding in preparation to receive post-Panamax vessels². The new *Hugh K. Leatherman Terminal (HLT)* is anticipated to add 2.4 million (Twenty Foot Equivalent) TEUs of throughput capacity to the Port of Charleston when fully built out and South Carolina's Port of Charleston now ranks as the nation's eighth-largest maritime hub and has moved into the Top Ten ports in the US³. Such growth is anticipated to have substantial impacts on emissions as increases in goods movement are expected. CCRAB's base communities are all located near the HLT and related goods movement corridors and are all primarily non-white and of lower socioeconomic status (SES). Total population estimates across all neighborhoods include approximately 8,300 persons and previous research identifies these neighborhoods as Environmental Justice Communities⁴. These communities are burdened with multiple National Priority List Superfund sites, past toxic releases, regulated air discharges, and have had to adjust to additional environmental and health impacts associated with a new port terminal and associated infrastructure. The proposed project will seek to reduce air quality impacts of the port on these communities by conducting long-term air monitoring, increasing community understanding of local environmental conditions and their impacts, and empowering residents to guide interventions that results in improved environmental and health outcomes.

Section 2: Community Involvement

A. Community Partnerships

The proposed grant activities will primarily serve to strengthen and expand upon existing partnerships established by the MPA and CCAMN, which received the **EPA's National Environmental Justice Achievement Award** in 2009. The award recognizes successful multi-stakeholder partnerships that address environmental justice issues or employ the goals of environmental justice to positively impact their community. Our core project partners include:

CCRAB Communities: A primary focus of grant activities is to increase capacity of individual communities to take part in efforts to improve environmental and public health outcomes. Citizen scientists from all eight communities will be trained and supported to assist with data collection and evaluation, participate in focus groups and guide ongoing research and interventions.

Lowcountry Alliance for Model Communities (LAMC): LAMC and CCRAB are intentionally bound by a shared history, future vision, core values and communities served (See Community-Based Organization Documentation and Letter of Support). LAMC will receive a subaward to partially support a Community Organizer to coordinate project outreach and engagement. LAMC also plans to establish a CMAB Operating Fund and provide stipends to CMAB members as an extension of their capacity-building services.

¹Corbett JJ, Winebrake JJ, Green EH, Kasibhatla P, Eyring V, Lauer A. Mortality from ship emissions: a global assessment. *Environ Sci Technol*. 2007;41(24):8512-8. Epub 2008/01/19. doi: 10.1021/es071686z. PubMed PMID: 18200887.

²Hricko A. Progress and pollution: port cities prepare for the Panama Canal expansion. *Environ Health Perspect*. 2012;120(12):A470-3. Epub 2012/12/06. doi: 10.1289/ehp.120-a470. PubMed PMID: 23211315; PMCID: PMC3548291.

³Wren D. Fast-paced growth moves Charleston port ahead in US top 10 list. *The Post and Courier*. 2022; and Authority SCSP. Port Expansion 2022. Available from: <http://scspa.com/facilities/port-expansion/>.

⁴Wilson SM, Fraser-Rahim H, Williams E, Zhang H, Rice L, Svendsen E, Abara W. Assessment of the distribution of toxic release inventory facilities in metropolitan Charleston: an environmental justice case study. *American Journal of Public Health*. 2012;102(10):1974-80; and Wilson SM, Fraser-Rahim H, Zhang H, Williams EM, Samantapudi AV, Ortiz K, Abara W, Sakati W. The spatial distribution of leaking underground storage tanks in Charleston, South Carolina: An environmental justice analysis. *Environmental Justice*. 2012;5(4):198-205.

MUSC Air Quality Lab: The Medical University of South Carolina (MUSC) Air Quality Lab (AQL) facilitates the capacity to monitor air pollution in a variety of settings. The AQL will receive a subaward to provide air monitoring equipment and expertise; assist with site establishment; oversee operation and maintenance of monitoring sites; oversee the quality assurance plan; and support data management and dissemination. Data collected through MUSC resources improve the robustness of CCRAB site data quality and other citizen science activities.

SCSPA: As required by the MPA, the SC State Ports Authority is funding and overseeing air monitoring at each of their terminals. They will participate in CCAMN meetings and share quarterly updates on data collected by their monitors.

DHEC: DHEC will participate in CCAMN meetings and share data collected by their monitors through their Federal Reference Monitoring program, which monitors for Clean Air Act pollutants and provides regulatory quality data.

Public Schools in Base Communities: Nearly twenty schools reside within two kilometers of the HLT. MUSC and DHEC have monitored air pollution at multiple schools in our region and we will build upon these connections to establish community-school monitoring partnerships.

B. Community Engagement

As a community-based organization that originated as the Community Advisory Board for LAMC mitigation communities, our core mission and activities are led by the communities that we serve. CCRAB applies the principles of CBPR, Community-owned and Managed Research (**COMR**) and the Collaborative Problem-Solving Model (**CPS**) to increase resident agency in efforts to improve environmental and health outcomes. Outreach for project activities will focus on 1) recruitment of citizen scientists to participate in training and education (**Objective 2**); gathering resident input through focus groups and feedback surveys to ensure quality and efficacy of data reporting tools (**Objective 3**), and 3) increasing broad awareness of data trends, associated impacts and risk reduction strategies through a portfolio of tools and communication strategies (**Objective 3**). CCRAB's approach to outreach is designed to meet the community where they are and cater to a variety of experiences and needs (language, age, culture, etc.). Outreach strategies will include: collaboration with neighborhood councils to disseminate information via canvassing and email blasts; regular presentations with community-based groups; pop-up informational sessions in churches, barber and beauty shops, bus terminals, and convenience stores; development of outreach materials in a variety of formats and in both Spanish and English; installing educational signage on monitoring stations; and using social media and infographics to translate scientific research into meaningful information. See Section 1.A., Objectives 2 and 3 for more details on community engagement activities.

C. Community-Based Organization Set-Aside

In 2005, residents of *Accabee, Chicora-Cherokee, Five Mile, Howard Heights, Liberty Hill, Union Heights* and *Windsor Place* came together and formed LAMC in an effort to create a unified voice for improving their neighborhoods and mitigating impacts of the anticipated port expansion. LAMC established a Community Advisory Board (CAB) to support residents' involvement in environmental and public health research and to facilitate partnerships with universities and local agencies. In 2014, the LAMC CAB established as its own 501(c)3 non-profit organization under the name of Charleston Community Research to Action Board (CCRAB). CCRAB continues to partner with LAMC to fulfill environmental and public health monitoring responsibilities as detailed in the MPA and prioritizes seats on the board for its base communities. Today, CCRAB's active base communities include the seven original mitigation communities as well as Rosemont, located on the other side of the Port Access Road from Union Heights.

Section 3: Environmental Justice and Underserved Communities

In 2009, our communities received EPA's **National Environmental Justice Achievement Award** in recognition of our efforts to address environmental justice concerns in our neighborhoods.

Current EJSCREEN data reveal our neighborhoods experience high health burdens as we are in the 95th percentile for Low Life Expectancy and Asthma, and the 80th percentile and higher for Heart Disease and demographic vulnerability (Figure 1).

Environmental indicators such as Diesel PM, Air Toxics Risk, Superfund Proximity, RMP Facility Proximity and Hazardous Waste Proximity are also relatively high. Studies have

demonstrated that communities hardest hit by COVID-19 were disproportionately

low-wealth communities of color. Data are still forthcoming but based on our experience, our communities are no exception. Project activities will address disproportionate health outcomes from pollution and the COVID-19 pandemic by 1) collecting necessary data to guide local interventions and policy changes, 2) increasing residents' literacy around environmental health and public health impacts, 3) engaging residents directly in monitoring activities, and 4) strengthening residents' voice and oversight in local monitoring efforts. These efforts will result in the reduction of harmful emissions and improved air quality in our member communities and surrounding areas.

Section 4: Environmental Results—Outcomes, Outputs and Performance Measures

A. Expected Project Outputs and Outcomes

CCRAB will ***leverage existing air quality monitoring expertise*** by expanding on our community-university partnership with the MUSC AQL to collect real-time high resolution air pollution data for PM_{2.5}, NO₂ and O₃ in eight communities and establish the communities' capacity to sustain long-term monitoring of near-source air pollution. CCRAB will ***give the community a voice in the monitoring of their air quality*** by engaging an expanded network of citizen scientists in CCAMN and supporting their capacity and agency. The network of citizen scientists will include: Community Monitoring Advisory Boards (CMAB) that will receive training and support to direct and manage their own monitoring activities, students at local public schools who will engage in air monitoring activities and learn about local environmental and public health challenges, and a network of residents who will assist with collection of screening-level data to identify air pollution hotspots and guide ongoing air quality research. CCRAB will ***build a foundation of trusting relationships and enhanced understanding from which sustainable solutions to community air pollution problems can be found*** by enhancing the role of CCAMN to facilitate broad awareness and mutual understanding of air quality data and related public health impacts across multiple stakeholder groups. A diverse portfolio of communication strategies will allow communities to minimize exposure risks, monitor impacts of interventions and track progress toward improved air quality. See tables on page 7 and 8 for more details on project outputs, outcomes and timeline.

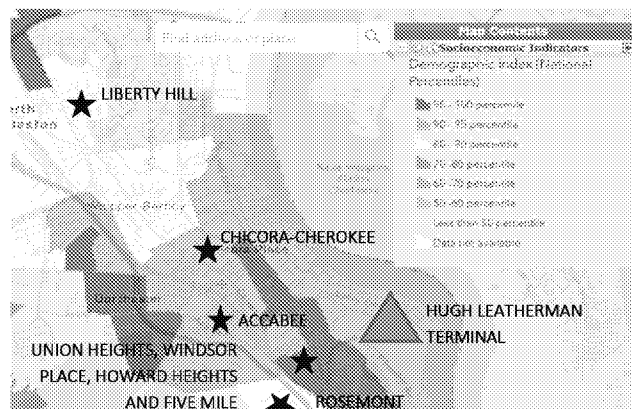


Figure 1. EJSCREEN Demographic Index for zip code 29405 (as of 3-20-22) with CCRAB communities and HLT

OUTPUTS	OUTCOMES
OBJECTIVE 1: ESTABLISH COMMUNITY CAPACITY TO CONDUCT LONG-TERM MONITORING OF NEAR-SOURCE AIR POLLUTION FOR PARTICULATE MATTER (PM_{2.5}), NITROGEN OXIDES (NO₂), AND OZONE (O₃) IN REAL-TIME	
<p>1) Site preparation and deployment of up to 8 fixed-site air monitoring stations near community points of interest (heavily trafficked roadways, industrial sources, the new port terminal and port access road), to monitor air quality in 5 Monitoring Areas (MA) for 8 communities.</p> <p>2) Collection and management of real-time data measuring fine particulate matter (PM_{2.5}), nitrogen dioxide (NO₂), and ozone (O₃) and relevant weather parameters including temperature, humidity, and winds.</p>	<p>High resolution air pollution data is collected for all 8 focus communities that will include measures of PM_{2.5}, O₃, and NO₂. Data will be used to provide real-time air quality reporting and long-term assessments of neighborhood air quality.</p>
OBJECTIVE 2: GROW A LOCAL NETWORK OF CITIZEN SCIENTISTS AND DEVELOP COMMUNITY CAPACITY TO GUIDE AIR QUALITY RESEARCH AND INTERVENTIONS LONG-TERM.	
<p>1) Provide capacity-building and funding assistance to support the establishment of five (5) Community Monitoring Advisory Boards (CMAB) for each MA.</p> <p>2) Develop curriculum and train CMAB members in: 1) deployment and maintenance of fixed-site and PurpleAir monitors; 2) data collection, management and evaluation; and 3) public health impacts and risk reduction strategies.</p> <p>3) Identify and deploy 3-4 screening locations (private residential or public) in each community using PurpleAir monitors and provide support and training for Monitor Hosts.</p> <p>4) Establish partnerships with at least 2 public schools in the monitoring area to engage students in programming related to environmental justice, public health impacts and air monitoring efforts.</p>	<p>1) Eight near-port communities have the capacity and support to direct and manage their own air monitoring activities.</p> <p>2) Screening-level data allows residents to identify air pollution hotspots and guide ongoing air quality research.</p> <p>3) Communities have increased agency to advocate for improved air quality, pollution reduction and risk reduction strategies.</p> <p>4) Increased community participation in CCAMN leads to a more holistic understanding of the health challenges produced by cumulative exposure to PM_{2.5}, NO₂, and O₃.</p>
OBJECTIVE 3: INCREASE COMMUNITY AWARENESS AND UNDERSTANDING OF AIR QUALITY DATA AND RELATED PUBLIC HEALTH IMPACTS.	
<p>1) Develop an air quality alert system using real-time data collected by community fixed-site monitors, including a low-tech alert system using visible exposure risk indicators on stations.</p> <p>2) Establish Data Access Sites in all MAs and disseminate regular air quality reports at Neighborhood Association meetings.</p> <p>3) Establish a Community Data Hub on CCAMN.org to share data collected by all CCAMN partners.</p> <p>4) Develop an annual Air Quality Report Card, live interactive Air Quality Dashboard and other educational materials to communicate key trends and progress to area policymakers, local governments, public health agencies and non-profits providing services to the focus communities.</p>	<p>1) Residents, businesses and institutions are well-informed of real-time air quality and trends and are able to minimize exposure risks.</p> <p>2) Data shared with local agencies and policymakers guide interventions and policy changes that result in improved air quality.</p> <p>3) Residents, CCAMN members, and other area agencies can monitor impacts of interventions and track progress toward improved air quality.</p>

	Year 1												Year 2												Year 3												
PROJECT MILESTONES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
OBJECTIVE 1																																					
Procure equipment for fixed site air monitoring (n=8)	X	X	X	X																																	
Onsite Training for new instruments (i.e.,AeroqualAQY-Rs)				X																																	
Update existing fixed-sites with enhanced instruments (n=2)			X	X	X	X																															
Establish new fixed-site monitor locations (n=3-5)			X	X	X	X	X	X	X	X	X	X																									
Fixed site air monitoring network fully operational (n=5-8)									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Fixed-site monitor site visits for visual inspection						X			X			X			X			X			X			X			X			X			X			X	
Equipment calibration, maintenance, and repair													X	X											X	X									X	X	
OBJECTIVE 2																																					
Design curriculum for EJ Academy Community Air Monitoring Module, Monitor Host trainings and Citizen Science in Schools	X	X	X	X	X	X	X	X	X																												
Community Monitoring Advisory Board (CMAB) recruitment						X	X	X																													
CMABs established (n=5)									X																												
CMAB members complete EJ Academy: Community Air Monitoring Module (6 sessions)										X	X	X	X	X	X																						
Inaugural annual CMAB gathering																												X									
Establish partnership agreement with local schools (n=2) and confirm program details	X	X	X	X	X	X	X																														
Citizen Science in Schools programming										X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X		X	X	X	X		
PurpleAir Monitor screening sites identification & Monitor Host recruitment						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
Monitor Host orientation/training (n=6)											X					X							X					X							X		
5 total PurpleAir monitors deployed (n=5)														X																							
10 total PurpleAir monitors deployed (n=5)																										X											
20 total PurpleAir monitors deployed (n=10)																																					X
OBJECTIVE 3																																					
Enhanced Community Air Monitoring program launch						X	X	X																													
CCAMN quarterly meetings (n=12)		X			X			X			X			X			X			X			X			X		X		X			X			X	
CCAMN Data Hub Beta Testing with Focus Groups (3 groups, 2 sessions)									X	X	X														X	X	X										
CCAMN Data Hub Revisions/Updates											X	X														X	X										
CCAMN Data Hub community access established												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Community Air Quality Report Card and Dashboard development with Focus Groups (3 groups, 2 sessions)													X	X	X										X	X											
CCAMN.org fully operational air quality dashboard launched																	X																				
Community Air Quality Report Card protocol established/published																							X	X											X	X	
Real-time air quality alert program Beta Testing with Focus Groups, concurrent revisions/updates (3 groups, 1 session)																					X	X	X														
Real-time air quality alert program goes live																								X													
OPERATIONAL/ADMINISTRATIVE																																					
Quarterly Grant Reports			X			X		X			X			X			X		X		X			X		X		X		X		X			X		
Final Grant Report preparation																																			X	X	X

B. Performance Measures and Plan

Progress toward achieving proposed objectives will be tracked, measured and evaluated using a variety of methods. For **Objective 1** activities, our key metrics of success are related to quality and frequency of data, as well as community validation of data (See QAS). For **Objective 2** activities, our quantitative metrics will include total number of participants, total number of training graduates, demographics of trainees and participants (age, gender identity, race/ethnicity and language-spoken), and communities represented. To track this data, we will use registration forms, attendance sheets and certificates of completion. Our qualitative metrics will measure for the efficacy of programming to develop community agency and build leadership capacity. We will assess these measures through feedback surveys and pre- and post-training assessments. For **Objective 3** activities, our quantitative metrics will measure for data usage (how often, from where, by whom and for what purpose) through website analytics and data user registration forms that collect information on demographics, role/affiliation, if they are using a community Data Access Site and intended use of data. We will track participation in CCAMN meetings and events through attendance roles; total number of air quality alert recipients by number of subscribers; and decreasing trends in exposure risk related to air pollution through annual Air Quality Report Cards and the interactive Air Quality Dashboard. Our qualitative metrics will measure for ease of use and value of the information being provided. We will track this through online feedback and error report forms, focus groups and organic feedback loops facilitated through the various community engagement touchpoints.

C. Timeline and Milestones (see page 8)

Section 5: Quality Assurance Statement (See Other Attachments Form)

Section 6: Programmatic Capability and Past Performance

A. Past Performance

CCRAB is currently operated by an all-volunteer working board and has historically relied on partnerships with universities and other partners to leverage the necessary resources for project activities. Historic funding support for CCRAB has been limited to small donations and pass-through funding from LAMC to support board and resident engagement in research activities. LAMC has recently initiated mitigation funding disbursements to CCRAB to carry out the agreed upon community-based environmental research activities as negotiated in the MPA (see Community-Based Organization Documentation). Funds requested via this application will leverage mitigation dollars and other active awarded funding and technical assistance, including:

- NIH Oceans and Human Health (sub-recipient), 2018-2025: \$39,000 (general operating)
- Friends of the Earth, awarded December 2021, 2022-2023 (recurring): \$5,000
- Coastal Community Foundation Healthy Harbors Fund, 2022-2023 (recurring): \$37,996
- Thriving Earth Exchange (technical assistance)
- Environmental Data Initiative (EDI) Data Management Fellowship (technical assistance)

B. Reporting Requirements

CCRAB has submitted financial and compliance sub-recipient reports by the requested deadlines as required for the NIH grant subaward agreement. CCRAB has provided timely reports to LAMC when requested for use of mitigation funds. Due to the active nature of the other funding assistance agreements, CCRAB has not yet needed to provide funding reports to those entities.

C. Staff Expertise

The core project team will consist of CCRAB's Project Manager (to be hired); Omar Muhammad, Executive Director of LAMC; Dr. John Pearce, director of the Medical University of

South Carolina (MUSC) AQL; Skip Mikell, CCRAB Chair; and Chloe Stuber, CCRAB Vice-Chair.

Gerard “Skip” Mikell is a retired chemical engineer and funeral home manager and current president of the Union Heights Neighborhood Association. In addition to serving as board chair for CCRAB, he serves on the board of LAMC and the Community First Land Trust. He has an extensive background in establishing multi-sector coalitions and has deep roots in the target communities. Skip will be the primary CCRAB representative on CCAMN and will support partnership development.

Chloe Stuber has supported capacity-building and organizational development of small non-profits and grassroots organizations for over 10 years. From her time in the non-profit sector, Chloe gained experience in the administration of millions of dollars in funding. She also established and managed a small grants program called the Southern Equality Fund which provides direct financial assistance to grassroots groups without 501(c)3 status or fiscal sponsors. Chloe will oversee grant compliance and administration and will provide project management support until the Project Manager is hired.

Dr. John Pearce will serve as the primary air pollution scientist for this project. He will be directly involved with numerous project activities (see LOS) and supporting implementation of the QAS. As the leader of the AQL, Dr. Pearce is ideal for this role as he has relevant expertise in environmental monitoring, statistics, exposure assessment and has worked with CCRAB for almost six years.

Omar Muhammad has worked as a community advocate and activist within the focus communities since 2007 and as Principal Investigator with numerous CCRAB research projects. Omar will supervise the Community Organizer employed by LAMC and assist with development of training curriculum. Omar is a graduate of the (US-EPA) Region IV Environmental Justice Academy and SCDHEC Leaders in Environmental Action Pilot (LEAP) and has delivered curriculum through LAMC’s EJ Academy with 12 cohorts in 4 states.

Section 7: Budget

A. Budget Detail & B. Reasonableness of Costs: The sections below include both requested EPA funds and project funds provided by CCRAB from other funding sources. Budget justification is ONLY provided for EPA requested funds.

Personnel

Project Manager (PTE): The Project Manager is a salaried part-time position at 20 hours per week, earning \$78,000 annually. Eighty percent (80%) of their time will be dedicated to this project. The total cost for the budget period for this position is \$192,000.

Fringe Benefits

The Fringe Benefit rate is set at 10% for part-time positions. Benefits will include a flat healthcare stipend of \$100/mo and two weeks of paid time off.

Travel N/A

Equipment

Instrumentation: 8 Aeroqual AQY-Y multipollutant monitoring platforms (quoted at \$6,521/unit).

Fixed Site preparation & Infrastructure: CCRAB is fully funding this expense.

Supplies

Event supplies. Meeting materials, food and drinks for 20 in-person events, averaging \$125 per event. CCRAB will provide a cost share of 50%.

Contractual

For all three services listed below, CCRAB will solicit quotes from at least three providers. The Board of Directors will compare quotes and qualifications and make the selection decision.

Data Management & Communications consultant. CCRAB is fully funding this expense.

Outreach & Communication expenses (translation). CCRAB is fully funding this expense.

Event expenses (childcare & interpretation). Two interpreters at \$50/hr and two childcare providers at \$25/hr for an estimated twenty (20) total events, each 2-hours long. CCRAB will provide a cost share of 30%.

Other

Aeroqual Technical and Training Support. CCRAB is fully funding this expense.

Aeroqual Shipping Costs. CCRAB is fully funding this expense.

Event Rental. CCRAB is fully funding this expense.

Sub-Awards

We understand that subrecipients are subject to Section IV.d. of the EPA Solicitation Clauses.

MUSC Air Quality Lab Subaward. The AQL will receive \$133,859 to cover 5% of Dr. Pearce's time (salary and fringe benefits), air monitoring data services, and equipment calibration and repair costs for the fixed-site monitors. CCRAB will provide a cost share of 31%.

LAMC Subaward. LAMC will receive \$93,600 to support a part-time Community Organizer who will dedicate 50% of their time to support project-related partnership activities including outreach, engagement and capacity-building. CCRAB will provide a cost share of 45%.

Participant Support Costs

Monitor Host Compensation. Up to 20 monitor hosts will be provided an annual flat compensation of \$150 and reimbursed for electricity and internet (if supplying) at a rate of 5% of total bills. It is anticipated that there will be 5 total monitor hosts by start of year 2, 10 total by start of year 3, and 20 total by end of the budget period.

Focus Group Gift Cards. Focus group participants will be provided a \$50 gift card per session for their participation (15 focus group sessions, six (6) participants per session).

Indirect

Administrative Assistant. The indirect rate of 15% is applied to a part-time Administrative Assistant with an annual salary of \$62,400 plus \$6,240 in Fringe Benefits (10% Fringe Rate).

C. Expenditure of Awarded Funds

The CCRAB Board of Directors meets on a monthly basis and reviews a financial report at every meeting. We use a detailed work plan to guide our efforts and review the work plan on a quarterly basis to ensure we are on track with our goals and to make modifications when necessary. Our Board Treasurer works with our bookkeeper (third-party consultant) to remit payments within one business week of receipt. Our bookkeeper uses Quickbooks for our accounting and will set up direct deposit for employee wages. Additionally, we will create expense categories to align with the presented project budget to ensure accurate and timely reporting on grant expenditures. The Administrative Assistant will provide support for expense documentation and reporting and will provide monthly grant expenditure reports for our Treasurer to present to the Board in addition to our regular monthly balance sheet.

Line Item & Itemized Cost	EPA Funding Requested	CCRAB Funding Provided
Personnel		
Project Manager (PTE) @ \$25/hr x 20 hrs/wk x 156 wks	\$192,000	\$0
TOTAL PERSONNEL	\$192,000	\$0
Fringe Benefits		
10% of Salary and Wages @ 10% x Total Personnel	\$19,200	\$0
<i>\$100/mo healthcare stipend and 2 weeks of paid time off</i>		
TOTAL FRINGE BENEFITS	\$19,200	\$0
Travel		
Monthly Site Inspections	\$2,000	\$0
TOTAL TRAVEL	\$2,000	\$0
Equipment		
8 Aeroqual AQY-Y multipollutant monitoring platforms @ \$6,521/unit	\$52,168	\$0
Fixed Site Preparation and Infrastructure	\$0	\$15,000
TOTAL EQUIPMENT	\$52,168	\$15,000
Supplies		
Event Supplies (facilitation materials and refreshments)	\$2,500	\$2,500
TOTAL SUPPLIES	\$2,500	\$2,500
Contractual		
Data Management & Communications consultant	\$0	\$30,000
Outreach & Communications (Translation)	\$0	\$3,000
Event expenses (Interpretation and Childcare)	\$4,000	\$2,000
TOTAL CONTRACTUAL	\$4,000	\$35,000
Other		
Aeroqual Training and Technical Support (8 hrs)	\$0	\$1,240
Aeroqual Shipping Costs	\$0	\$1,000
Event Rental	\$2,000	\$0
Printing (signage and outreach materials)	\$0	\$1,500
<i>Subawards</i>		
MUSC Air Quality Lab Subaward	\$133,859	\$60,000
LAMC Subaward	\$51,600	\$42,000
<i>Participant Support Costs</i>		
Monitor Host Compensation	\$5,000	\$0
Focus Group Gift Cards	\$4,500	\$0
TOTAL OTHER	\$196,959	\$105,740
Indirect Charges		
Administrative Assistant (PTE) (15% x \$187,200 salary + \$18,720 fringe)	\$30,888	\$0
TOTAL INDIRECT	\$30,888	\$0
TOTAL FUNDING	\$ 499,715	\$158,240
TOTAL PROJECT COST	\$ 657,955	

March 11, 2022

Charleston Community Research to Action Board (CCRAB)
2125 Dorchester Rd
North Charleston, SC 29405

Dear CCRAB Board Members:

Thank you for the opportunity to collaborate as an **academic partner** on your EPA grant application that seeks to enhance your community efforts to address air pollution concerns in neighborhoods near the newly developed Hugh Leatherman Terminal in Charleston, SC. This is a tremendous opportunity to improve understanding of how port-related activities can influence air quality in near port communities and how community-based activities can improve resilience of vulnerable neighborhoods. Over the past six years, it has been a tremendous pleasure getting to know your group and working with you to address environmental justice initiatives in your communities. In 2021, our work through the Charleston Area Air Monitoring Network (CAAMN) allowed us to begin community monitoring activities in two communities – *Union Heights* and *Accabee* - of interest in the proposed project. These activities have been highly productive as we have successfully collected data on Particulate Matter (PM) for nearly nine months at two sites and have held multiple community meetings to present and discuss our findings. To me, this has served as an invaluable 'pilot' study that has helped shape your project activities into a well-designed proposal. Your intentions to expand the scope of your monitoring efforts to include additional monitoring locations and gaseous pollutants demonstrates well-crafted intentions to tackle a complex environmental issue comprehensively and effectively. In addition, your goal of collecting data of the 'highest quality' shows your knowledge of the importance of having robust data to support your community efforts. To me, our ongoing partnership and your demonstrated history of success provide an ideal framework for ensuring that this project will serve as a national model for success.

As such, I am pleased to offer full support of my Air Quality Lab (AQL) to assist with the activities outlined in your community monitoring proposal. My lab provides state-of-the-art environmental monitoring solutions designed to support environmental health research in a variety of settings ranging from large-scale long-term ambient assessment to short-duration personal exposures. The lab entails a broad range of environmental monitoring and sampling equipment, Internet of Things (IoT) capabilities, and supports application of geographic information systems (GIS) and global positioning systems (GPS) technologies. For this project, I pledge to commit three additional near-reference TSI DustTrak DRX aerosol monitors (to our two existing) and two 2BTech Federal-Equivalent Method (FEM) gas monitors to ensure your efforts to collect data of the highest quality are met. This includes funding of all operating costs and maintenance and repair costs through the proposed subaward. In addition to providing air monitoring technologies, I

also commit to helping lead data quality assurance activities outlined in the Quality Assurance Statement.

If you have any questions regarding this collaboration, please do not hesitate to contact me. I look forward to your successful funding from the Environmental Protection Agency on this timely and important project and our continued collaboration.

Sincerely,

A handwritten signature in black ink that reads "John L. Pearce". The signature is written in a cursive style with a large, stylized 'J' and 'P'.

John L. Pearce, Associate Professor
Founder and Leader of the MUSC Air Quality Lab
Department of Public Health Sciences
Medical University of South Carolina
135 Cannon Street
Charleston, SC 29425
Phone: (843) 876-1594; Email: pearcejo@musc.edu



March 19,2022

Charleston Community Research to Action Board (CCRAB)
2125 Dorchester Road
North Charleston, SC 29405

Dear CCRAB Board,

I am the Executive Director for the Lowcountry Alliance for Model Communities (LAMC) located in Charleston, South Carolina. The LAMC organization has established authentic, equitable, and transformative programs and initiatives because we have used the community-based participatory research (CBPR) framework, community-owned and managed research (COMR) principles, and the USEPA's collaborative problem-solving (CPS) model to improve our community. Our partnerships have been impactful because it has helped residents increase their environmental health literacy and build their capacity to address local environmental justice concerns, understand environmental health issues and address air quality and soil contamination issues. Our partnerships and relationships in the Charleston region position us well to perform and achieve the goals for this grant, develop policies and solutions to implement strategies to address air quality concerns. We are pleased to offer our support for your proposal to the United States Environmental Protection Agency to expand your air quality monitoring work in the LAMC targeted areas.

Specifically, our community organization will work with the research team to achieve the goals and objectives of the proposed project to develop a sustainable community-engaged framework that will enhance collection of local air quality data and support development of local knowledge promoting effective decision-making to reduce impacts of air pollution. We will assist the team in several areas specific to the aims of this project as proposed: *Aim 1*: Enhance community capacity to monitor neighborhood-level air pollution in real-time for particulate matter (PM2.5), nitrogen oxides (NO2), and ozone (O3). *Aim 2*: Expand the existing community-university partnership to include partners from local governmental agencies, schools, and business. *Aim 3*: Build a platform that will support sustainable solutions to addressing community environmental concerns.

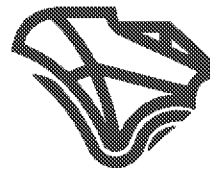
If you have any questions or concerns, please do not hesitate to contact my on my cell at (843) 693-3911.

Sincerely,

Omar Muhammad

Executive Director

Lowcountry Alliance for Model Communities



**SOUTH
CAROLINA
PORTS**

March 25, 2022

Charleston Community Research to Action Board
2125 Dorchester Road
North Charleston, SC 29405

200 Ports Authority Dr.
Mount Pleasant, SC 29464
(843) 375-3102

scspa.com

Dear Review Committee:

My name is Mark Messersmith and I serve as the representative for the South Carolina Ports Authority (SCPA) on the Charleston Community Air Monitoring Network (CCAMN). SCPA maintains an air monitoring station on the new Hugh Leatherman Terminal and is also funding the ongoing evaluation of air quality within an adjacent neighborhood through a collaboration with South Carolina Department of Health and Environmental Control (SCDHEC).

It is our understanding that the Charleston Community Research to Action Board (CCRAB) is partnering with the Medical University of South Carolina (MUSC) and the Lowcountry Alliance for Model Communities (LAMC) on an application to the Environmental Protection Agency (EPA) to fund an air quality monitoring project. As explained, the proposal requests funding to support a state-of-the-art community air monitoring network in communities near the SCPA Hugh Leatherman Terminal. The project aims to: 1) enhance community air monitoring capacity; 2) strengthen the community-monitoring advisory group; and 3) develop a trusted community engagement and data sharing platform that addresses environmental concerns. Nationally, project results will contribute knowledge to EPA's Ports Initiative in which SCPA is involved in as well.

I am writing to voice our support of this application for funding. CCRAB and their research partners have been working to understand and communicate the environmental justice concerns that exist in the communities they serve. This project will aid in their ability to use community-based participatory research to build capacity to understand and address local exposure to environmental stressors, particularly air pollution.

CCRAB and their partners have been actively involved in community-based advocacy and research within our area. We are confident they will continue this important work and build upon the growing body of knowledge regarding air quality in the region.

Thank you,

Mark Messersmith
Permitting Manager, SCPA
Member, CCAMN



March 22, 2022

Charleston Community Research to Action Board (CCRAB)
2125 Dorchester Road
North Charleston, SC 29405

Dear Omar Muhammad,

As CCRAB prepares an application for the Environmental Protection Agency's Community Air Monitoring grant, the Office of Environmental Affairs at the South Carolina Department of Health and Environmental Control (SC DHEC) would like to express its' support for the Citizen Science Air Monitoring Project that this organization has outlined in its grant proposal. SC DHEC also supports and applauds this organization's collaborative problem solving that you've instituted by partnering with the Lowcountry Alliance for Model Communities (LAMC), the Medical University of South Carolina (MUSC), and the LAMC communities in North Charleston, SC.

In conjunction with the previous, existing, and planned ambient monitoring and community engagement, the activities in CCRAB's proposal will provide a more robust baseline assessment in anticipation of significant changes in local activity. We look forward to collaboration between the community-based monitoring and local DHEC operated criteria monitoring to provide a more comprehensive impact assessment than would otherwise be possible. We expect to be able to provide the community and the above-mentioned partners with timely access to SC DHEC ambient monitoring data.

SC DHEC has worked with and has had a strong partnership with LAMC and CCRAB for many years. The LAMC communities are adjacent to a former naval shipyard. Before its closing, SC DHEC dealt with many of the citizens who had air quality concerns brought on by all the traffic associated with the shipyard. After the shipyard closed, it was decided by the S. C. Ports Authority and our General Assembly that the port would expand onto the former shipyard. LAMC was the first community in the nation to sign a community mitigation plan using NEPA and the health impacts the new port would have on the community. As part of that agreement, SC DHEC serves on the Mitigation Agreement Committee that was formed to ensure that the \$4.1 million awarded in funding to LAMC is being used accordingly.

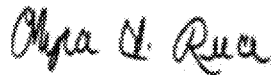
In 2009, SC DHEC received a cooperative agreement from the U. S. Environmental Protection Agency. This money was used to support the Leaders in Environmental Action Pilots (LEAP) project. We used \$100,000 of the \$160,000 awarded to SC DHEC to provide seed money in the amount of \$25,000 each to 4 non-profits in environmental justice communities. LAMC was one of the four awarded this money. The pilots were charged with identifying and addressing their environmental and social justice concerns and working to address those issues. We also strived to

build leadership capacity by providing an extensive workshop once a year for the pilots. We also identified resources to help these communities address their concerns.

During that opportunity, we built a strong partnership with the leadership of LAMC. Since then they have supported us on projects such as the South Carolina Environmental Leadership Forum, have served on our EJ HUB, and many other committees that we staff and/or need community involvement. We recognize the strong leadership within this organization and are always willing to support them so that they can achieve their goals as a community organization; we will serve as a partner on this endeavor as well if the funding is awarded.

If you have any questions, please do not hesitate to contact me at (803) 898-4102.

Sincerely,

A handwritten signature in black ink, reading "Myra N. Reece". The signature is written in a cursive, flowing style.

Myra Reece, Director of Environmental Affairs
The South Carolina Department of Health and Environmental Control

March 22, 2022

Charleston Community Research to Action Board
2125 Dorchester Road
North Charleston, SC 29405

Dear Review Committee:

My name is Latarsha Giles and I serve as the president of the Concerned Citizens of Accabee. We are one of the seven LAMC communities. It is our understanding that the Charleston Community Research to Action Board is partnering with the Medical University of South Carolina (MUSC) and the Lowcountry Alliance for Model Communities (LAMC) on an air quality monitoring project. I am writing in support of this application for funding.

CCRAB and their research partners have been leaders in understanding and communicating the environmental justice concerns that exist in the communities they serve. They have been utilizing community-based participatory research to build community capacity to understand and address local exposure to environmental stressors. This research is important to us because our neighborhood sits adjacent to significant industrial activities including a new port and rail facility.

CCRAB and their partners have established themselves as leaders in community-based advocacy and research within our area. We are confident they will continue this good work. I am equally confident the concerns they are researching are critical to our community quality of life and the methodology they utilize can serve as a national model for environmental justice communities beyond Charleston.

Thank you for your consideration,

Latasha Giles

A handwritten signature in black ink, appearing to read "Latarsha Giles", written over the printed name and title.

Concerned Citizens of Accabee

March 21, 2022

Charleston Community Research to Action Board
2125 Dorchester Road
North Charleston, SC 29405

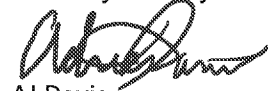
Dear Review Committee:

My name is Adrian "AJ" Davis and I serve as the president of the Chicora/Cherokee Neighborhood Council. We are one the seven LAMC communities. It is our understanding the Charleston Community Research to Action Board is partnering with the Medical University of South Carolina (MUSC) and the Lowcountry Alliance for Model Communities (LAMC) on an air quality monitoring project. I am writing in support of this application for funding.

CCRAB and their research partners have been leaders in understanding and communicating the environmental justice concerns that exist in the communities they serve. They have been utilizing community-based participatory research to build community capacity to understand and address local exposure to environmental stressors. This research is important to us because our neighborhood sits adjacent to significant industrial activities including a new port and rail facility.

CCRAB and their partners have established themselves as leaders in community-based advocacy and research within our area. We are confident they will continue this good work. I am equally confident the concerns they are researching are critical to our community quality of life and the methodology they utilize can serve as a national model for environmental justice communities beyond Charleston.

Thank you for your consideration,



AJ Davis
President
Chicora/Cherokee Neighborhood Council

March 24, 2022

Charleston Community Research to Action Board
2125 Dorchester Road
North Charleston, SC 29405

Dear Review Committee:

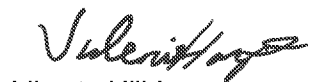
My name is Valerie Harper and I serve as the president of the Liberty Hill Improvement Council. We are one of the seven LAMC communities. It is our understanding that the Charleston Community Research to Action Board is partnering with the Medical University of South Carolina (MUSC) and the Lowcountry Alliance for Model Communities (LAMC) on an air quality monitoring project. I am writing in support of this application for funding.

CCRAB and their research partners have been leaders in understanding and communicating the environmental justice concerns that exist in the communities they serve. They have been utilizing community-based participatory research to build community capacity to understand and address local exposure to environmental stressors. This research is important to us because our neighborhood sits adjacent to significant industrial activities including a new port and rail facility.

CCRAB and their partners have established themselves as leaders in community-based advocacy and research within our area. We are confident they will continue this good work. I am equally confident the concerns they are researching are critical to our community quality of life and the methodology they utilize can serve as a national model for environmental justice communities beyond Charleston.

Thank you for your consideration,

Valerie Harper

A handwritten signature in black ink, appearing to read 'Valerie Harper', with a stylized flourish at the end.

Liberty Hill Improvement Council

March 21, 2022

Charleston Community Research to Action Board
2125 Dorchester Road
North Charleston, SC 29405

Dear Review Committee:

My name is Nancy Button and I serve as the president of the Rosemont Community Association. We are one of the seven LAMC communities. It is our understanding that the Charleston Community Research to Action Board is partnering with the Medical University of South Carolina (MUSC) and the Lowcountry Alliance for Model Communities (LAMC) on an air quality monitoring project. I am writing in support of this application for funding.

CCRAB and their research partners have been leaders in understanding and communicating the environmental justice concerns that exist in the communities they serve. They have been utilizing community-based participatory research to build community capacity to understand and address local exposure to environmental stressors. This research is important to us because our neighborhood sits adjacent to significant industrial activities including a new port and rail facility.

CCRAB and their partners have established themselves as leaders in community-based advocacy and research within our area. We are confident they will continue this good work. I am equally confident the concerns they are researching are critical to our community quality of life and the methodology they utilize can serve as a national model for environmental justice communities beyond Charleston.

Thank you for your consideration,

Nancy Button


Rosemont Community Association

March 21, 2022

Charleston Community Research to Action Board
2125 Dorchester Road
North Charleston, SC 29405

Dear Review Committee:

My name is Skip Mikell and I serve as the president of the Union Heights Neighborhood Association. We are one of the seven LAMC communities. It is our understanding that the Charleston Community Research to Action Board is partnering with the Medical University of South Carolina (MUSC) and the Lowcountry Alliance for Model Communities (LAMC) on an air quality monitoring project. I am writing in support of this application for funding.

CCRAB and their research partners have been leaders in understanding and communicating the environmental justice concerns that exist in the communities they serve. They have been utilizing community-based participatory research to build community capacity to understand and address local exposure to environmental stressors. This research is important to us because our neighborhood sits adjacent to significant industrial activities including a new port and rail facility.

CCRAB and their partners have established themselves as leaders in community-based advocacy and research within our area. We are confident they will continue this good work. I am equally confident the concerns they are researching are critical to our community quality of life and the methodology they utilize can serve as a national model for environmental justice communities beyond Charleston.

Thank you for your consideration,


Skip Mikell

Union Heights Neighborhood Association

CHLOE STUBER

Agent for community-led equitable planning and development

PERSONAL MISSION STATEMENT

Be an agent for equitable and just communities; facilitate multi-sector collaboration for systems-level change; and promote and sustain initiatives that support power-building and leadership of oppressed communities and individuals.

EDUCATION

College of Charleston (Charleston, SC)
Master of Public Administration & Graduate Certificate in Urban and Regional Planning | May 2019

Warren Wilson College (Swannanoa, NC)
Bachelor of Social Work | 2011

CERTIFICATES & TRAININGS

Certificate in Nonprofit Management
Duke University and Western NC Nonprofit Pathways | 2016

Facilitating the Deeper Practices of Social Change
Stone Circles at the Stone House, Mebane, NC | 2014

SKILLS & COMPETENCIES

- Land use planning, housing and community development
- Group facilitation & participatory planning
- Program design & Project management
- Organizational development & Program evaluation
- Donor/Funder relations & Grant writing
- GIS (ArcGIS v10.X, Map, Catalog Pro and Online)
- Promoting racial, class and gender equity, and language justice within organizations and systems.
- Bilingual in Spanish and English

CONTACT ME

Ex. 6 Personal Privacy (PP)

EMPLOYMENT & INTERNSHIPS

Department of Planning, Preservation and Sustainability, City of Charleston, SC | 2019-present

- *Senior Planner* | 2022-present
 - Affordable Housing Concierge
 - Project Manager and Engagement Strategy Team Leader for special planning initiatives
 - Administrative support for Planning Commission, ordinance amendments and annexations
- *Planner* | 2019-2022

Graduate Intern

Department of Housing & Community Development, City of Charleston, SC | 2018-2019

- Coordination of special initiatives related to affordable housing and homelessness and capacity-building support for key community partners.
- Assistance with grant administration and compliance related to HUD programs (CDBG, HOME and HOPWA).

Graduate Assistant

Community Assistance Program, College of Charleston | 2017-2018

- Capacity-building consulting for nonprofit, government, and community groups related to: organizational development, program evaluation, community needs assessments and strategic planning.

Campaign for Southern Equality, 2013-2017

- *Director, Southern Equality Fund* | 2015-2017
 - Launch, growth and management of the Southern Equality Fund (southernequality.org/fund-your-work/get-funding).
 - Supervision; grant writing and funder relations
- *Coordinator, Hometown Organizing Project* | 2014-2015
- *Operations Manager* | 2013-2014

OTHER HATS

PODER Emma, Project Consultant

Buncombe County, NC | January 2020-present

- Research, policy-advocacy strategy and facilitation support for community-led planning initiative to deepen community understanding of land use and zoning policy and facilitate collaboration with the City and County to mitigate potential displacement and gentrification.

Charleston Community Research to Action Board (CCRAB), Board Vice-Chair

Charleston County, SC | January 2019-present

- CCRAB is an environmental justice organization, led by a working volunteer board, that facilitates citizen science and community-led research initiatives in partnership with universities.
- Led research initiative focused on relationship between land use planning and public health. Visit "Land Use, Planning and the Environment in North Charleston" at <https://arcg.is/5fH4S>

Personal and Biographical Information

Gerard Harold (Skip) Mikell, Sr.

Born Ex. 6 Personal Privacy (PP) Jamaica, Long Island, NY the only son of Elizabeth H. Mikell and the late Harold E. Mikell, Jr.; formerly married to the former Beverly A. Fields of Savannah, GA, father of four children Jacquin R. Mikell-Fields, Gerard H. Mikell, Jr., Jihan R. Mikell-Breedlove and Jasmine R. Mikell-Flemister, grandfather of nine, Jade Fields, Darien Mikell, Frederick Fields, Cameron Breedlove, Gerard H. Mikell, III, Madison Breedlove, Brianna Flemister, Gabriella Mikell and Bradford Flemister

Ex. 6 Personal Privacy (PP)

Professional Certifications

Certified Instructor – First Aid / CPR American Red Cross and American Heart Association

Certified – American Management Association – 12 Month Supervisory Training Program 1973

Certified Emergency Medical Technician 1973 – 1990

Certified Industrial Fire Fighter 1976 – 1997

Certified Trainer – Quality Assurance, Continuous Improvement 1984

Certified Instructor/Developer – Industrial Training Programs

Certified Auditor – ISO 9000 – 9002 1997

Certified Auditor – QS 9000 2000

Volunteer Activities

American Red Cross Tissue Service National Funeral Director Advisory Committee, Boy Scouts of America, North Charleston Community – Gethsemane Community Center, Mentor – Chicora Elementary School

Education

1966 Graduated Burke High School, Charleston, SC

1967 Graduate Pittsburgh Institute of Mortuary Science, Pittsburgh, PA Diploma – Mortuary Science

1984 Graduated Trident Technical College, North Charleston, SC Certification – Supervisory Management – 2 Year Program

1995 Certification – Chemical Technician/Production Operations, Trident Technical College

Professional Experience

1967 – 1969 Apprentice/Intern – Suburban Funeral Home, Inc.

1969 – Present Licensed Funeral Director/Embalmer - Suburban Funeral Home, Inc.

1984 – Present, Vice President, CFO Suburban Funeral Home, Inc., North Charleston, SC

1968 – 1971 Quality Control Laboratory Technician – Mobil Chemical Co.

1971 – 1973 Quality Control Laboratory Technician – Bayer Chemical Corp.

1973 – 1997 Production Supervisor – Bayer Chemical Corp.

1997 – 2003 Manager – Quality Assurance, Quality Programs and Quality Assurance Laboratories – Rubber Chemical Division – Bayer Corp.

2004 – 2014 - General Manager – Suburban Funeral Home, Inc.

2014 – Retired as manager of Suburban Funeral Home, Inc.

2016 – Regional Sales Director – Legacy Planning and Solutions

Short form resume. Publications and presentations available upon request.

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME: Pearce, John

eRA COMMONS USER NAME (credential, e.g., agency login): jlpearce

POSITION TITLE: Associate Professor

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
University of Georgia, Athens, Georgia	BS	12/2002	Ecology
University of Georgia, Athens, Georgia	MS	05/2007	Environmental Health
Monash University, Melbourne, Victoria	PHD	06/2011	Geography & Environmental Science
Emory University, Atlanta, Georgia	Postdoctoral Fellow	08/2014	Environmental Biostatistics

A. Personal Statement

I am trained as an environmental health scientist with expertise in environmental monitoring with a focus on ambient air pollution monitoring. This application proposes to develop an enhanced community air monitoring network that utilizes citizen scientists to understand air pollution caused by port expansion in Charleston, South Carolina (SC). A key goal of the project is to develop a community air monitoring program that will help residents better understand local air quality and potential exposure. This is a complex task that will require expertise with air pollution monitoring, statistical modeling, data science, geographic information systems (GIS) and mapping, and website architecture. I am a well-qualified to contribute to this project as I have over a decade of experience researching air pollution through number of projects that have involved air pollution monitoring (e.g., active forest fires, near roadway, residential, commercial, and personal), development of statistical models that predict and/or explain drivers of air pollution (e.g., weather drivers, spatial variability), and mapping of air pollution (e.g., particulate matter, multipollutant). It is also important to note that I am the founder and leader of the Air Quality Research Lab at MUSC, a state-of-the-art facility that encompasses a variety of air pollutant monitoring and measurement technologies, which will be strong resource for this project as it can support a variety of necessary activities (e.g., monitor comparisons and evaluations, maintenance, etc.). Moreover, I have been working with the LowCountry Alliance for Model Communities (LAMC) and the Charleston Community Research to Action Board (CCRAB) since 2015 to conduct baseline assessments and develop resources that can support community air quality concerns.

Below is a representative list of relevant citations:

- Commodore A, Wilson S, Muhammad O, Svendsen E, **Pearce J**. Community-based participatory research for the study of air pollution: a review of motivations, approaches, and outcomes. *Environ Monit Assess*. 2017;189(8):378. Epub 2017/07/08. doi: 10.1007/s10661-017-6063-7. PubMed PMID: 28685368.
- **Pearce J**, Commodore A, Neelon B, Boaz R, Bozigar M, Wilson S, Svendsen E. A novel approach for characterizing neighborhood-level trends in particulate matter using concentration and size fraction distributions: a case study in Charleston, SC. *Air Quality, Atmosphere & Health*. 2017;10(10):1181-92. doi: 10.1007/s11869-017-0503-y.
- Commodore S, Metcalf A, Post C, Watts K, Reynolds S, **Pearce J**. A Statistical Calibration Framework for Improving Non-Reference Method Particulate Matter Reporting: A Focus on Community Air Monitoring Settings. *Atmosphere*. 2020;11(8):807. PubMed PMID: doi:10.3390/atmos11080807.

B. Positions, Scientific Appointments, and Honors

Positions and Scientific Appointments

- 2020 - Health Effects Institute, ad hoc reviewer
- 2020 - NIEHS Superfund Program, ad hoc reviewer
- 2019 - NIEHS Career Development Program, ad hoc reviewer
- 2014 - Assistant Professor, Department of Public Health Sciences, Medical University of South Carolina, Charleston, SC
- 2006 - Member, International Society for Environmental Epidemiology
- 2006 - Member, International Society of Exposure Science

- 2013- *Ad hoc journal reviewer for: Atmosphere, Atmospheric Environment, Environmental Health, Environmental Health Perspectives, Environment International, Environmental Research, Epidemiology, Plos-One.*

Honors

- 2017 Invited Speaker - Webinar , The NIEHS Exposure Science and the Exposome Webinar Series
- 2012 Best Doctoral Thesis, Department of Geography & Environmental Science, Monash University
- 2010 Student Research Award, Clean Air Society of Australia and New Zealand
- 2006 1st Place Student Poster Competition, International Society of Exposure Science

C. Contribution to Science

1. **Air Pollution.** Air pollution is a highly complex process that varies over time and space as well as by composition. As such, it is not uncommon for health effects studies of air pollution to identify the exposure assessment as one of the greatest limitations. This particular issue has motivated much of my research as I have aimed to create tools that can improve the exposure science of air pollution. This has led to my development of strategies for monitoring air pollution in a number of environments (e.g., hot spot, downwind, community, personal) as well as development of statistical approaches that synthesize and illustrate the findings. A collection of relevant works is presented below with highlights ranging from identification of size fraction compositions by community to development of a hybrid land-use regression - kriging model to predict pollutant concentrations in an international city. A review of the literature is also included.
 - a. **Pearce JL**, Neelon B, Bozigar M, Hunt KJ, Commodore A, Vena J. Associations between multipollutant day types and select cardiorespiratory outcomes in Columbia, South Carolina, 2002 to 2013. *Environ Epidemiol.* 2018 Dec;2(4) PubMed Central PMCID: PMC6426330.
 - b. Commodore A, Wilson S, Muhammad O, Svendsen E, **Pearce J**. Community-based participatory research for the study of air pollution: a review of motivations, approaches, and outcomes. *Environ Monit Assess.* 2017 Aug;189(8):378. PubMed PMID: 28685368.
 - c. **Pearce JL**, Commodore A, Neelon B, Boaz R, Bozigar M, Wilson S, Svendsen E. A novel approach for characterizing neighborhood-level trends in particulate matter using concentration and size fraction distributions: a case study in Charleston, SC. *Air Quality, Atmosphere & Health.* 2017. DOI: 10.1007/s11869-017-0503-y
 - d. **Pearce JL**, Waller LA, Sarnat SE, Chang HH, Klein M, Mulholland JA, Tolbert PE. Characterizing the spatial distribution of multiple pollutants and populations at risk in Atlanta, Georgia. *Spat Spatiotemporal Epidemiol.* 2016 Aug;18:13-23. PubMed Central PMCID: PMC4977533.

Complete List of Published Work in MyBibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/john.pearce.1/bibliography/public/>

Ex. 6 Personal Privacy (PP)

Extensive experience in community engagement strategies, environmental and social justice solution development in underserved communities, and collaborative partnership development strategies. Passionate about community development, environmental and social justice concerns. Strong computer, communication, and public speaking skills. Outstanding interpersonal, motivational and presentation abilities. Analytical, articulate, and diligent.

Core Competencies

Grant Writing	Logic Model Development	Community Planner
SWOT Analysis	Facilitator	Environmental Assessment
Public Speaking	Technical Writing	Project Design
Project Evaluation	Community-based Participatory	Project Management
Collaborative Partnerships	Community Capacity Building	Community Engagement

Professional Experience

Zoning Planner, City of Charleston **01/22 - Present**

Responsible for reviewing development and community plans for compliance with current zoning, work on special zoning policies (equity, affordability, resilience, etc), work with consultants on updating City of Charleston’s zoning ordinances, and assist applicants with zoning requests and applications.

Fishery Biologist, South Carolina Department of Natural Resources **08/2002- 12/2021**

Responsible for project design and evaluation for fishery management research that led to the development of a validated conversion factor used to convert gutted landed fish to whole weights. I led the development of a field technique to remove the aging structure from Hogfish which has led to improved management decisions involving this species. Responsible for the data collection, editing and management of fishery related landings data to ensure the most accurate information is available for stock assessments and quota monitoring.

Senior Fellow, Environmental Leadership Program (ELP) **07/2007-Present**

As an ELP Senior Fellow, I received training that allowed me to develop skills in Organizational Development, Capacity Building, Effective Communication, Fundraising Strategies, Grant Writing, Leadership Training, and Presentation methodologies. This experience allowed me to grow as a young leader in the environmental and social justice movement by providing a network of other passionate leaders around the country working on various environmental concerns.

Leaders in Environmental Action Pilots (LEAP)

09/2009-2012

Participating in LEAP provided me the capacity to address local environmental, public health and economic challenges by understanding and applying the Collaborative Problem-Solving Model which provides a framework for developing collaborative problem-solving efforts. By participating in this program, I was able to extend our organization's network to include state, federal and academic partners.

2016 Graduate of EPA's Region IV Environmental Justice Academy

09/2015-04/2016

Participating in the EJ Academy has helped me to become a more effective leader in the Environmental Justice movement. The EJ Academy Alumni network provides an opportunity to work on regional EJ concerns. I was the Valedictorian for the 2016 EJ Academy Inaugural Class.

Community Experience

Community Project Consultant, Charleston Community Research to Action Board (CCRAB)

08/2010-Present

CCRAB directly formed as a direct result with concerns about environmental and social justice challenges in North Charleston, SC. I helped CCRAB address communities' environmental and social justice issues by developing robust projects; expanding CCRAB's network relationships to include other non-profits, schools, academic institutions, local, state, and federal agencies; development of communication and community engagement strategies and securing diverse funding sources to address identified issues. To that end, I was recently successful in the award of a community giving grant for CCRAB to train community members on the use of an online mapping tool used to highlight environmental contaminants in neighborhoods and several grants to address cumulative impacts of community-based contaminants in the air, soil and water. Specifically, I support the day-to-day implementation of the proposed projects.

Executive Director, Lowcountry Alliance for Model Communities (LAMC) **05/2015-Present**

I have worked as a community advocate and activist since 2007 as a volunteer for the Lowcountry Alliance for Model Communities (LAMC). I have served as LAMC's web-site content coordinator and community engagement liaison. Currently, I serve as LAMC's Executive Director. I serve on the Mitigation Agreement Workgroup which advises LAMC on implementation of the Mitigation Agreement between the City of North Charleston, the South Carolina State Ports Authority and LAMC. I serve on the Clean Power Plan Environmental Justice Analysis Workgroup for the State of South Carolina and the Clean Power Plan Advisory Workgroup for the State of South Carolina. I have successfully led efforts to engage the LAMC communities through various outreach strategies. I am currently working with several communities on addressing Environmental Justice concerns.

Education

Augusta State University, Augusta, GA. Bachelor of Science in Biology. 2001

College of Charleston, Charleston, SC. Master of Arts in Community Planning, Policy and Design. 2021.